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January 13, 2014

Dear Council President Rice and Members of the County Council:

You will soon make an extremely important decision for the future of the physical and fiscal health of the citizens of this county and the Washington metropolitan area: whether to protect the source of our emergency reserve drinking water or to allow development of the Ten-Mile Creek watershed that will seriously degrade it. On behalf of the Neighbors of the Northwest Branch of the Anacostia River, I urge you to decide in favor of clean water.

We who experience the continued degradation of the Northwest Branch from violent surges of warm stormwater that scour the banks and deposit egg-suffocating sediment can only dream of Ten-Mile Creek's cool waters and the abundant fish, amphibians, reptiles, and water bugs that show this is a healthy stream. Ten-Mile Creek is a treasure worth preserving, but not only as a reference stream against which to measure our less healthy ones. Its flow constitutes 25% of the water of Little Seneca Lake, constructed as a reservoir to replenish the Potomac River in times of drought.

Some have apparently questioned the arguments raised by clean water advocates.

### **Is Ten-Mile Creek really an important back-up drinking water supply?**

I understand that some have expressed doubts about the importance of Ten-Mile Creek as a reserve drinking water source, since the large Jennings-Randolph reservoir and smaller Savage Reservoir in Western Maryland serve that purpose. According to the 2013 *Drought Primer for Council of Governments Chief Administrative Officers*,<sup>1</sup> it takes seven to nine days for water released from Jennings Randolph to reach WSSC's intake pipes. In a severe drought, what do we drink for eight days while that water is enroute? Little Seneca Lake provides our emergency resource. Its water can reach WSSC in just one day. I was surprised to learn that Fairfax County and the Washington Aquaduct, as well as WSSC, contributed to funding its construction and expect to use its water.<sup>2</sup> They too have an interest in the quality of this water. Could there be legal consequences if we fail to protect it?

### **What makes us think there will be any serious droughts requiring releases from Little Seneca Lake?**

History and foresight. Little Seneca Lake came to our rescue in the 1999 drought and again in 2002. We almost had to use it in 2010. According to climate scientists, the Potomac basin has warmed significantly and will continue to warm.<sup>3</sup> The referenced Interstate Commission on the Potomac River Basin (ICPRB) study modeled 18 Potomac basin scenarios for the year 2040 on a warming planet. In 16 of them, stream base flow decreases by up to 34%.<sup>4</sup> In 6 of the 18, the situation

is so dire that the reservoirs—all of them—are near empty.<sup>5</sup> A warming climate has complex possible results, which is why 18 scenarios were modeled. Generally, a warmer climate means more loss of water into the atmosphere. It may mean more precipitation in the winter months, but in the form of rain that runs off rather than snow that melts slowly and replenishes the Western Maryland reservoirs. That makes Little Seneca Lake all the more important. The Potomac also has an environmental flow-by requirement intended to preserve its ecosystem, and other people up and down the river depend on its waters.

**Does it matter whether water intended for municipal use is clean or laden with sediment?** Yes it does. Cleaning water, to the extent it CAN be cleaned, is expensive. That is why Fairfax County insisted on building a mid-river intake. At an expense of at least \$25 million, WSSC is now also obliged to build a mid-river intake pipe because water from along the edge, just below Watts Branch, is too contaminated with sediment and fecal coliform bacteria to use. Bacteria cling to sediment. Where do we go for water when the entire Potomac is too dirty?

**Why would an impervious average of 9% in the headwaters, with 25% in one portion, doom Ten-Mile Creek?** The Ten-Mile Creek watershed is particularly sensitive to disturbance, more so than the average, because of the soil type—although percentages such as those proposed would degrade any stream. A technical report commissioned by the Maryland National Capital Park and Planning Commission on the watershed explains that the soils are phyllite (in leaves, like phyllo dough, easily split) and highly erodible.<sup>6</sup>

The technical report says further:

In addition to direct water quality impacts that can be caused by the greater volume of runoff and associated loads of pollutants such as nutrients, metals, fertilizers, salts, hydrocarbons and other urban pollutants, stream morphology can also be impacted by altered hydrology caused by increased impervious cover and loss of natural soils and forests. ... the change in hydrology increases stream power, and consequently results in erosion and enlargement of stream channels. *At impervious covers as low as 7 to 10% in a watershed, an “unraveling” of streams can be seen, as evidenced by an enlarged cross-sectional profile, including both stream widening and downcutting.* [emphasis added.]<sup>7</sup>

The report gives Seneca Creek as an example. Clarksburg development enlarged Seneca Creek’s channel by 15% and increased its depth by over 50%, resulting in very degraded stream habitat. These effects will be magnified as climate change brings us stronger storms.

**Why then in our last best stream, the emergency source of our drinking water, would we knowingly allow any portion of it to suffer 25% impervious surface, or the average to come to 9%? Why would we entrust such a treasure to engineered stormwater controls?**

Aerial photographs show heavy sediment carried by the other two tributaries of the reservoir, Little Seneca Creek and Cabin Branch, despite the application of ESD practices. It is clear that stormwater controls do not compensate for forest removal and regrading of land.<sup>8</sup> Loss of these

creeks only increases the urgency of protecting Ten Mile Creek from any further degradation than it has already suffered from construction and operation of the Clarksburg Jail.

We MUST do better.

Richard Klein, a known expert on reducing stormwater runoff and the inherent limitations of ESD, has called for impervious surface at no more than 6%, with a minimum of 50% of the watershed left in forest.<sup>9</sup>

As the current elected stewards of our resources, the responsibility has fallen to you to look to the future as the ICPRB study has done with its 2040 study and as those in charge back in the early 1980s did when they constructed the Little Seneca and Western Maryland reservoirs. When you take into account the warming climate, an expanding population's need for clean water, and the inevitable destruction caused by disturbing and paving a fragile terrain, I am sure you will conclude as we have that **the primary objective of this master plan amendment must be the protection of Ten Mile Creek, even though that means land conservation and radically scaling back development.** We urge you to leave a legacy you can be proud of--for biodiversity, for the Metro Region's water supply, for us, and for our children. **Save Ten Mile Creek.**

Sincerely,



Anne Ambler, President

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<sup>1</sup>*Drought Primer for Council of Governments Chief Administrative Officers*, May 1, 2013. See <http://www.mwcog.org/environment/water/downloads/Drought%20Primer%20for%20May%202013%20CAO%20meeting-%20FINAL.pdf>, 4 pp.

<sup>2</sup> Interstate Commission on the Potomac River Basin, 2010 Washington Metropolitan Area Water Supply Reliability Study: Part 2: Potential Impacts of Climate Change, p. 2. See <http://www.potomacriver.org/publicationspdf/ICPRB13-07.pdf>.

<sup>3</sup> The ICPRB study cites several studies showing a warmer climate for our area, op cit., p. 8.

<sup>4</sup> ICPRB op cit, p. xiv.

<sup>5</sup> "For the six climate scenarios with the most significant impact on basin hydrology, storage in most system reservoirs is almost completely depleted during a moderate drought in 2040. This is particularly the case for Jennings Randolph water supply, Little Seneca Reservoir, and the Patuxent reservoirs.... 2) Moderate impact scenarios: Under six of the scenarios, the region experiences more frequent and stricter water use restrictions during a moderate drought, including mandatory restrictions, and significantly lower reservoir levels. 3) Major impact scenarios: The remaining six scenarios indicate that, in the absence of operational or structural changes to the water supply system, a moderate drought would cause the imposition of mandatory and emergency water use restrictions and the near emptying of most system reservoirs. In addition, water supply shortfalls would occur on some days of the drought," ICPRB op cit., Conclusions, p. 57.

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<sup>6</sup>*Ten Mile Creek Watershed Environmental Analysis in Support of the Clarksburg Master Plan Limited Amendment*, Summary of the 1994 Master Plan Scenario Analysis, p. 7, included in Montgomery Planning Department, *Biological Condition Gradient*, 2013, at pdf p.43. See:

[http://www.montgomeryplanningboard.org/agenda/2013/documents/20130411\\_Clarksburg\\_Attachments\\_for\\_Staff\\_Report\\_000.pdf](http://www.montgomeryplanningboard.org/agenda/2013/documents/20130411_Clarksburg_Attachments_for_Staff_Report_000.pdf).

<sup>7</sup> Montgomery Planning Department, op cit., at pdf p. 51.

<sup>8</sup> The ways that development damages streams are doubtless well known to Council—by removing shading and stabilizing vegetation, by destroying underground channels that feed base flow, by exposing and loosening sediment that runs off into the stream, and by increasing hard surfaces so that water runs rapidly into the stream via storm sewers rather than springs.

<sup>9</sup>Email from Richard Klein to Pulte PR Firm, Sent 6/12/2013 1:20:26 P.M. EDT.